

**SULTAN CITY COUNCIL
AGENDA ITEM COVER SHEET**

ITEM NO: H-1

DATE: February 12, 2009

SUBJECT: Hold Public Hearing - Amendments to Sultan Municipal Code Chapter 17.08, Flood Damage Prevention

CONTACT PERSON: Robert Martin, Community Development Director



ISSUE:

Update Sultan Municipal Code (SMC) Chapter 17.08, Flood Damage Prevention to accommodate changes called for in recent Community Assistance Visit (CAV) by Washington Department of Ecology (DOE) and the Federal Emergency Management Agency (FEMA).

SUMMARY:

City Staff and the Planning Board recommend revisions to Chapter 17.08 SMC to address issues raised by the Department of Ecology during its 2009 review of the City's Flood Damage Prevention Regulations.

RECOMMENDATION:

Staff recommends that the Council conduct a Public Hearing on amendment of Sultan Municipal Code (SMC) Chapter 17.08, Flood Damage Prevention.

PRIOR ACTION:

At its regular meeting of January 20, 2009, the Sultan Planning Board conducted a Public Hearing on the proposed amendment to Chapter 17.08, Flood Prevention. The Planning Board approved a motion to recommend adoption of the proposed amendment to the City Council (**Attachment A:** January 20 Planning Board Minutes-pertinent part).

At its regular meeting of January 22, 2009, the City Council received the Planning Board's recommendation and set February 12, 2009 as the date for a Public Hearing on the Planning Board draft of the proposed amendments.

BACKGROUND:

Due to the extensive portion of the City that is in the Skykomish/Sultan River Floodplain, the City is heavily involved in the National Flood Insurance Program (NFIP). An important component of this program is the Community Rating System (CRS) that assigns value to various activities by the Community in pursuit of effective flood loss management. Sultan is a participant in the CRS and has a favorable rating of Class 7 in recognition of effective ongoing flood loss management. This favorable rating results in reduced flood insurance premiums for residents of the City who are in the NFIP.

The Department of Ecology (DOE) and the Federal Emergency Management Agency (FEMA) periodically conduct Community Assistance Visits (CAV) with local Communities to assist them in keeping current and, if possible, increasing their insurance rating. Sultan had a CAV on July 2, 2008. On July 9, 2008, the City received a letter from DOE outlining the activities that would keep Sultan current with its favorable insurance rating (**Attachment B**). Pages 1, 2, & 3, of the July 9th letter indicate several changes that need to be made to SMC Chapter 17, Flood Damage Prevention. **Attachment C** is a letter to Mr. Chuck Steele of the Department of Ecology, updating City progress on his July 9th CAV letter.

Attachment D contains the Planning Board Draft of the proposed changes in legislative mark-up needed to accomplish the changes to SMC Chapter 17 that are called for in the July 9th letter.

Since the Planning Board meeting, City Staff has made changes to Section 17.08.130 to address recreational vehicles in the floodplain as requested by the Planning Board.

DISCUSSION:

The July 9th letter addresses three categories of work to be done.

1. **"Floodplain Regulations"** on pages 1, and 2 calls for very specific modifications of Code to implement Flood Management Standards required of new construction or substantial remodel construction as it occurs on a day-to-day basis in the Community. These are required by State and Federal standards. The City has essentially no options in these items. City Staff has included these provisions in the draft of Chapter 17.08 at the appropriate locations.
2. **"Procedures"** on pages 2 and 3 calls for the City to set up specific procedures and standards on how floodplain provisions are implemented and managed on a day-to-day basis. The requirement for these procedures is not optional. The specific provisions established to enact the requirements can be adjusted to fit the Community's governmental structure.
 - a. Section 17.08.070 Administration, has been significantly modified to establish codified procedures from the permit stage through construction, to final inspection.
 - b. Section 17.08.090 and 17.08.100 have been significantly modified to provide procedures and criteria for Conditional Uses and Variances under the SMP.
 - c. The role of City Staff in daily administration and in development of Staff Reports for various applications is clarified.
 - d. Where applicable, the City Council has been removed from procedures involving implementation of the SMP, and those functions have been vested in the Hearing Examiner with appeal to Superior Court.

City Staffs work on these changes is constructed to conform with the City of Sultan's administrative structure. The City Council has some latitude in review of these procedures to insure that the Community is involved and protected to the best advantage.

3. **“Field Inspection Report Cases”** lists specific properties that did not have complete field inspection records in the appropriate file. Documentation for these properties is substantially complete at this time.

With these changes, and the others called for in the letter, most of which have already been completed, the City is doing everything requested to retain its Class 7 Rating in the CRS.

ATTACHMENTS:

Attachment A: Planning Board Minutes (pertinent part) January 20, 2009

Attachment B: July 9, 2008 Letter from Department of Ecology

Attachment C: January 30, 2009 Letter to Department of Ecology from City of Sultan

Attachment D: Planning Board Draft of proposed Amendment (in legislative mark-up)

January 20, 2009 PLANNING BOARD MEETING MINUTES

PLANNING BOARD MEMBERS PRESENT:

Frank Linth
Steve Harris
Keith Arndt
Robin Shaw
Jerry Knox

CITY STAFF:

Bob Martin, DCD
Carole Feldmann, Secretary

CALL TO ORDER: Meeting called to Order at 7:03 PM

Pledge of Allegiance:

Roll Call: See Above

Changes to the Agenda:

Martin: Requests Items H-2 and A-2 be removed from tonight's Agenda to allow notice period for Shoreline Master Plan amendments to run their course.

Planning Board Member Comments:

Members welcome the new Planning Board Member Jerry Knox. Mr. Knox introduces himself and looks forward to being a member of the board and participating in this process.

WELCOME NEW PLANNING BOARD MEMBER

At the January 8, 2009 City Council Meeting the Mayor appointed Mr. Jerry Knox to the Planning Board that appointment was confirmed by City Council. Mr. Knox fills the vacancy left by Mr. Paul McBride. Mr. Knox will fill the term which ends June, 2009 and will be available for reappointment at that time.

Approval of Minutes:

Shaw moves to accept the Minutes of January 6, 2009 Planning Board Meeting, 2nd by Harris, all in favor, all ayes.

Hearing and Action Items:

H-1 Public Hearing on Amendments to Sultan Municipal Code Chapter 17.08, Flood Damage Prevention:

Martin: Explains to PB Members the Public Hearing must be held in compliance with statute and policy to take public comment on proposed updates to the Sultan Municipal Code (SMC) Chapter 17.08, Flood Damage Prevention to accommodate recommendations from the recent Community Assistance Visit (CAV) by Washington Department of Ecology (DOE) and the Federal Emergency Management Agency (FEMA), then chose to close or continue the Hearing as appropriate. Action will be taken on the proposed Amendment following the Hearing. This date was set at the January 6, 2009 meeting. The City is heavily involved in the National Flood Insurance Program (NFIP) due to the extensive portion of the City that is in the Skykomish/Sultan River Floodplain. The Community Rating System (CRS) assigns value to various activities by the community in pursuit of effective flood loss management and prevention. Pages 1, 2, & 3, of the July 9, 2008 letter from the

Department of Ecology indicate several changes that need to be made to SMC Chapter 17.08, Flood Damage Prevention. Staff and a Consultant have prepared a draft of the changes called for in the July 9th letter.

Attachment A show staff changes in legislative mark-up needed to accomplish the recommendations to SMC Chapter 17.08 requested in the July 9th letter. The letter pointed out 3 areas; (1) Floodplain Regulations, (2) Procedures, (3) Field Inspection Report Cases.

Public Comments on Hearing:

No Public Comments

Harris: Motion to close the public hearing; 2nd by Shaw, all ayes.

Comments from Planning Board Members:

Linth: Requested explanation on the basement standards, ground elevation, grade-line etc., floodplains v. floodways and in item 26 when you file your claim w/ FEMA, clarification on the standards that must be met, that pared with definition of substantial improvement, brings in 50 % issue.

Martin: Clarifies and answers to Linth's questions on the formulas and definitions used to create these standards.

Arndt: Would like to know if moving the most critical inspection point to another phase could reduce the need for so many inspections. Why are different inspections worded so differently, can't they clean up the language so it is concise? Instead of worded so differently?

Martin: States it's necessary, it may seem like overkill however it is easier to go back and repair smaller segments of a job done incorrectly than to go back and removed concrete and/or the finished product after it is completed.

Arndt: Inquires to the previous outdated language for feasibility to current standards and has it been corrected so no conflicts exist? Who sets the reasonability standard as written?

Martin: Will review the outdated language and make corrections as necessary. FEMA sets the standards in question.

Linth: Questions the recreational vehicles on site for 180 days and the language they be fully licensed for highway use, believes that should be taken out.

Arndt: Asks Deborah Knight, (City Administrator) if these changes do what you need them to do? Do they satisfy the current requirement for flexibility in interpreting the Base Flood Elevation?

Ms. Knight: These changes address short-term issues of the July 9, 2208 letter to retain Level 7 Rating. They indicate that the long term course is for more regulation and fewer options at the local level.

Linth: Wants to bring this back at the next meeting with changes identified, before sending it to council.

Arndt: Recommends moves to send the document forward with amendments as discussed to City Council on Amendment of Sultan Municipal Code Chapter 17.08 Flood Damage Prevention for approval, Planning Board Members can examine the document with changes suggested prior to the next city council meeting. If members agree not to accept it the council will need to be notified. 2nd by Linth, all ayes.

RECEIVED
JUL 10 2008



BY:.....

STATE OF WASHINGTON
DEPARTMENT OF ECOLC

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washin

July 9, 2008

Ms. Deborah Knight
Sultan City Administrator
P.O. Box 1199
Sultan, WA 98294-1199

Attachment B

Dear Ms Knight:

I appreciated the opportunity to meet with City Officials on July 2, 2008 to discuss Sultan's participation in the National Flood Insurance Program (NFIP). The meeting, called a Community Assistance Visit (CAV), was with Bob Martin and Cyd Donk of your staff. Also present were Craig Bruner, your former Building Official, and Jamie Huff of the FEMA Region X office. This letter summarizes findings and discussions from the meeting.

A primary purpose of our visit was to assure enforcement by the City of Chapter 17.08, Flood Damage Prevention, of the Sultan Municipal Code. Continued enforcement enables FEMA to continue to allow flood insurance to be sold in the City. Other purposes of these visits are to provide you with the most current information on the NFIP and State regulations and to give your staff a chance to discuss issues concerning the City's floodplain management program.

Our major concerns at CAV meetings involve: [1] the currency of local floodplain regulations; [2] procedures for implementing these regulations, and [3] information to document findings from our Field Inspection Report. Our findings related to these concerns follow:

Floodplain Regulations. Chapter 17.08 was reviewed prior to the meeting. With amendments adopted through Ordinance No. 808 on February 19, 2003, we found the Chapter to be substantially compliant with NFIP and State floodplain management regulations. However, we did find deficiencies that will need to be corrected in order for us to certify full compliance, and these deficiencies must be corrected as a condition of closing the CAV. They are:

17.08.080A.7. Use of Other Base Flood Data. An attempt was made in this section to combine two regulatory requirements (see Sections 4.3-2 and 5.1-5 of the Model Ordinance), but one of the requirements was not successfully included. After the phrase "When base flood elevation data is not available either through the Flood Insurance Study or FIRM," the following words need to be added: "the building and zoning official shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a Federal, State or other source, in order to administer Sections 110 through 130 of this chapter." If you wish to keep these sections together, this wording could be followed with a new sentence, as follows: "Where elevation data is not available either through the Flood Insurance Study, FIRM, or from another authoritative source," then continue with the remaining wording ("applications for building permits shall be reviewed. . .").



Attachment B-1



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17.08.110B.4.a, Manufactured Home Anchoring. Both subsections 110B.4.a and 110B.4.b contain a clause that needs to be modified. The term "securely anchored to an adequately designed foundation system" needs to be changed to "securely anchored to an adequately anchored foundation system."

17.08.110B.5.a, Floodway Encroachment Standard. In order to be fully compliant with current NFIP standards, the last phrase in this standard needs to be changed to read as follows: "... demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge."

17.08.110B.5, Floodway Construction. A subsection needs to be added to guide construction if a proposal complies with the floodway encroachment standard. See Section 5.4(3) of the Model Ordinance that was left with the City for proper wording for this subsection.

17.08.070B.2, Elevation Certificate. In the State of Washington, only a Professional Land Surveyor licensed in the State can complete Elevation Certificates (EC), per documentation I provided to the City at the CAV meeting. Thus, the reference to having an EC prepared by an engineer in this section needs to be deleted.

17.08.050, 23, Definition of Substantial Damage. This definition currently states that if a building is damaged by only 10 percent of its market value when a natural disaster has been declared, it is considered "substantial" damage and, thus, must be elevated. This measure is considerably more restrictive than FEMA's 50 percent figure, and it was not uniformly enforced in the 2006 flood. The measure must either be deleted, or the City must show complete enforcement for all cases that were damaged over 10 percent in 2006, regardless of whether or not they had flood insurance.

Accessory Structures. We discussed allowing minor accessory structures to be built below the Base Flood Elevation outright, as opposed to requiring a variance as is now the requirement in Chapter 17.08. This can be done, but the City would have to amend the chapter to specify performance standards in order to allow such structures outright. The standards are shown on page 27 of the outline that was provided at the CAV meeting.

Procedures. At our last CAV in 2002, we did not specify a need for written procedures because it was apparent that the City was correctly enforcing and documenting its floodplain cases. However, as a result of reviewing the specific field cases at the CAV meeting, we saw several instances of slippage in documenting floodplain cases; hopefully, these slippages will not result in enforcement problems. Because of this, the City will need to prepare written procedures describing how various staff handle all types of flood cases, including new construction, substantial improvements and "other" development (fills, grading, etc.). The procedures need to address at least the following:

B.2

- Who does the flood review for single-family and for other cases; how are permits routed to and from this person? What is the flow among City staff in the process of issuing a permit for development in the floodplain?
- The process for determining whether an improvement (or an application to rebuild damaged structures) is a substantial improvement needs to be spelled out in your procedures.
- Elevation Certificates need to be provided to applicants for all types of buildings at the time of permit issuance. The City needs to complete Section B of the EC which addresses map information; the applicant completes Section C and returns the EC to the City as a condition of issuance of the Certificate of Occupancy. This was being done at the time of the 2002 CAV, but is not apparently being done currently.
- The procedures need to address adequate openings in crawlspace construction, how they are documented, when they are inspected, etc.
- The procedures need to assure that below-grade crawlspaces will either not be allowed, or the City needs to specifically adopt provisions to allow below-grade crawlspaces per FEMA Technical Bulletin 11-01 which was provided at the meeting.

If you would like to see copies of procedures from other communities, please let us know.

Field Inspection Report Cases. There were 11 specific cases cited in our field Inspection Report for which documentation was requested. Of the 11, the city provided information that was sufficient to clear six of the cases. Using numbers from our report, these cases were #3, 5, 6, 8, 10, and 11. Three of these properties had received Letters of Map Amendment from FEMA (509 Alder, 624 Date and 274 Elm Court), two had Elevation Certificates showing compliance (808 Dyer and 209 2nd Street), and the house at 412 Cedar pre-dated the date of the last CAV.

Additional information will be needed for cases #1, 2, 4, 7 and 9, as follows:

#1, 905 Dyer Road. This 2006 house did not have an Elevation Certificate based on finished construction; the as-built EC must be provided before we can close this CAV. It must show compliance with the elevation, openings and below-grade crawlspace requirements.

#2, 900 Dyer Road. There was no EC for this garage/residence. The City will have to produce an as-built EC or elevation information showing that the land on which the structure was built was above the Base Flood Elevation.

#4, 206 Skywall Drive. An EC based on completion of the lowest floor was required for this new house per 17.08.070B.2. Either this EC or one based on finished construction needs to be provided by the City to show compliance with all requirements of Chapter 17.08.

#7, 614 Alder Street. As with the previous case, an EC based on completion of the lowest floor was required for this townhouse, but the City did not make the requirement. The City must provide an EC either based on the lowest floor or, if the construction will be complete by the deadline specified below, an EC based on finished construction.

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July 9, 2008

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#9, 707 Alder Street. This manufactured home was placed in 2004, but the City did not have an EC for it. A completed EC based on finished construction will need to be provided.

The City of Sultan has had a strong floodplain management program, as evidenced by your Class 7 rating in the Community Rating System. However, the deficiencies described above are surprising in that they had been routinely covered in the City's standard procedures at the time of the last CAV.

In order to continue eligibility in the NFIP and in the Community Rating System, the City will have to address the issues raised in this letter **within 120 days** of the date of the letter. If you have any questions related to anything in this letter, please feel free to call me at (425) 649-7139.

Sincerely,



Charles L. Steele
Floodplain Management Specialist

cc: Mark Carey, FEMA
Dan Sokol, Ecology
Linda Ryan, ISO/CRS
Honorable Carolyn Eslick
Bob Martin
Cyd Donk

B-4



City of Sultan

FILE COPY

January 30, 2009

Mr. Chuck Steele
Department of Ecology
3190 – 160th Avenue S.E.
Bellevue, WA 98008-5452

Subject: CAV Visit July 2, 2008
Eligibility Requirements for the NFIP and the CRS

Dear Mr. Steele:

Thank you for coming to Sultan for our Community Assistance Visit in July 2008. In your follow-up letter dated July 9, 2008, you called for responses in three categories. The City of Sultan provides the following information in response to your letter:

- **Floodplain Regulations:**
The City has constructed a draft of revisions to Sultan Municipal Code (SMC) Chapter 17.08., Flood Damage Prevention. The Planning Board, at its January 20th regular meeting held a public hearing on the Planning Board Draft of these provisions (Attachment A). The Board voted to forward the draft to the City Council for a hearing at their level and consideration for adoption. With appropriate modifications, I anticipate the code amendments to be adopted by the end of February, 2009.
- **Procedures:**
The need for written procedures is acknowledged. The framework for these procedures is much more fully established in the draft revisions of Chapter 17.08. Upon adoption of the amendments by the City Council, the procedures contained in the Code will be synthesized into a procedures document that will be used for daily operations.

We are in the contract signing phase of a relationship with a consultant specializing in permit process documentation and implementation. He will be on-board in early February. His expertise will be employed to review and finalize a documented procedure tracking system for this sub-routine in our building permit process. You offered examples from a couple of comparable communities who have documented their procedures. We would certainly appreciate you sending one or two that you think would be applicable to our circumstances.

- Field Inspection Report Cases:
Of the 11 specific cases cited, the City provided sufficient information to clear up 6 of these cases. Of the 5 remaining cases all but 2 have provided updated elevation certificates to date. We are still working with the homeowners to acquire the last 2 elevation certificates.

Thank you for working with the City of Sultan to keep our flood management program in compliance. My own personal experience with this program is nowhere as extensive or specialized as that of Craig Bruner. While I am working to come up to speed on this along with my other responsibilities in the Community Development Department, Craig is graciously assisting both as a paid consultant and as a highly experienced volunteer. With the assistance of Craig and our permit process consultant, we look forward to a well documented and effectively implemented flood management program.

Should you have any further questions, please do not hesitate to contact me at 360.793.1311.

Sincerely;



Robert C. Martin
Director of Community Development

c: Mark Carey, FEMA
Dan Sokol, DOE
Linda Ryan, ISO/CRS
Mayor Carolyn Eslick
Deborah Knight, City Administrator
Cyd Donk

Chapter 17.08 Flood Damage Prevention

Sections:

17.08.010 Statutory authorization.

17.08.020 Findings of fact.

17.08.030 Statement of purpose.

17.08.040 Objectives.

17.08.050 Definitions.

17.08.060 General provision.

17.08.070 Administration.

17.08.080 Duties and responsibilities of the building and zoning official.

17.08.090 Variance procedures.

17.08.100 Conditions for variance.

17.08.110 Provisions for flood hazard reduction.

17.08.120 Standards for subdivision proposals.

17.08.130 Recreational vehicles.

17.08.140 Critical facility.

17.08.010 Statutory authorization.

The legislature of the State of Washington has delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the City of Sultan does ordain as set forth in this chapter.

17.08.020 Findings of fact.

- A. The flood hazard areas of the City of Sultan are subject to periodic inundation that may result in loss of life and property, health, and safety hazards, disruption of commerce and government services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
- B. These flood losses are caused by the cumulative effect of obstructions in floodplains resulting in increases in flood heights and velocities, and by the occupancy in flood hazard lands by structures that are inadequately elevated, flood proofed, or otherwise unprotected from flood damage.
- C.

17.08.030 Statement of purpose.

It is the purpose of this chapter to promote the public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- A. Restrict or prohibit uses that are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- B. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- C. Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of floodwaters;

- D. Control filling, grading, dredging and other development that may increase erosion or flood damage; and
- E. Prevent or regulate the construction of flood barriers that will unnaturally divert floodwaters or which may increase flood hazards to other lands.

17.08.040 Objectives.

The objectives of this chapter are:

- A. To protect human life and health;
- B. To minimize expenditure of public money for costly flood control projects;
- C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. To minimize prolonged business interruptions;
- E. To help maintain a stable tax base by providing for the sound use and development of flood prone areas in such a manner as to minimize the number of blighted areas that could be created by floods;
- F. To ensure that potential homebuyers are notified that property is in a flood area; and
- G. To prevent the loss of federal assistance to the City of Sultan due to a violation of federal flood control requirements.

17.08.050 Definitions.

A. Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter it's most reasonable application.

1. "Appeal" means a request for a review of the interpretation of any provision of this chapter or a request for a variance.

2. "Area of special flood hazard" means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. Designation on maps always includes the letters A or V.

3. "Assessed Valuation" means the value placed on a property by the Snohomish County Assessors office.

4. "Base flood" means the flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as the "100-year flood." Designation on maps always includes the letters A or V.

5. "Basement" means any area of the building having its floor subgrade (below ground level) on all sides. See Technical Bulletin 11-1

6. "Breakaway wall" means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

7. "Critical facility" means a facility for which even a slight chance of flooding might be ~~to~~ too great. Critical facilities include, but are not limited to, schools, nursing homes, hospitals, police, fire and emergency response installations, installations which produce, use or store hazardous materials or hazardous waste.

8. "Design Flood Elevation" means at a minimum the base flood elevation plus freeboard.

9. "Development" means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, the storage of

equipment and materials, mining, dredging, filling, grading, paving, excavation or drilling operations located within the area of special flood hazard.

I. 10. "Elevated building" means for insurance purposes, a non-basement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.

J. 11. "Existing manufactured home park or subdivision" means a manufactured home park subdivision for which the construction of the facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the adopted floodplain management regulations.

K. 12. "Expansion to an existing manufactured home park or subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured home are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

L. 13. "Flood or flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from:

1-a. The overflow of inland or tidal waters; and/or

2-b. The unusual and rapid accumulation of runoff of surface waters from any source.

M. 14. "Flood insurance rate map (FIRM)" means the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

N. 15. "Flood insurance study" means the official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood.

O. 16. "Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

P. 17. "Lowest floor" means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building's lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirements of this chapter, SMC 17.08.110(B)(3).

Q. 18. "Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term manufactured home does not include a "recreational vehicle".

R. 19. "Manufactured home park or subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

S. 20. "New construction" means structures for which the "start of construction" commenced on or after the effective date of the ordinance codified in this chapter.

T. 21. "New manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads is completed on or after the effective date of adopted floodplain management regulations.

U. 22. "Recreational vehicle" means a vehicle which is:

- a-a. Built on a single chassis;
- b-b. Four hundred square feet or less when measured at the largest horizontal projection;
- c-c. Designed to be self-propelled or permanently towable by a light duty truck; and
- V-4.d. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational camping, travel, or seasonal use.

23. "Start of construction" includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction or a structure on the site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement the actual start of construction means the first alteration of any wall, ceiling, floor, other structural part of a building, whether or not that alteration ~~effects~~ affects the external dimensions of the building.

24. "Site Plan" per International Building Code sections 106.2 and IRC section R106.1 and R106.2 with references to figure 1 and Technical Bulletin 10-01 The construction documents submitted with the application for a floodplain development permit shall be accompanied by a site plan showing to scale the items listed in Section 17.08.070 B below.

25. "Structure" means a walled and roofed building including a gas or liquid storage tank that is principally above ground.

W-26. "Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the assessed value~~market value~~ of the structure before the damage occurred, ~~or 40 percent of the market value when a natural disaster has been declared in Snohomish County.~~

X-27. "Substantial improvement" means:

- 1-a. Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the assessed~~market~~ value of the structure either:
 - a-i. Before the improvement or repair is started; or
 - ~~ii.~~ ii. If the structure has been damaged and is being restored, before the damage occurred. For the purposes of the definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.
- b-b. The term does not, however, include either:
 - i-i. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code

enforcement official and which are the minimum necessary to assure safe living conditions; or

ii Any alteration of a "historic structure" provided, that the alteration will not preclude the structures continued designation as a "historic structure."

Y.28. "Variance" means a grant of relief from the requirements of this chapter which permits construction in a manner that would otherwise be prohibited by this chapter.

Z.29. "Water dependent" means a structure for commerce or industry which cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations.

17.08.060 General provisions.

A. Lands to which these performance standards apply. These performance standards shall apply to all areas of the special flood hazards within the jurisdiction of the City of Sultan.

B. Basis for establishing the areas of special flood hazard. The area of special flood hazard identified by the Federal Emergency Management Agency in a scientific and engineering report entitled "The Flood Insurance Study for Snohomish County, Washington and Incorporated Areas," dated November 8, 1999, and any revisions thereto, with accompanying flood insurance rate map (FIRM) are adopted by reference and declared to be a part of these performance standards.

C. Establishment of Permit. A floodplain development permit shall be required in conformance with the provisions of these standards prior to the commencement of any development activities.

D. Compliance. No structure or land shall hereafter be located, extended, constructed or structurally altered without full compliance with the terms of these standards and other applicable laws.

E. Abrogation and Greater Restrictions. These performance standards are not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. ~~However, where these standards and any other conflict or overlap, whichever imposes the more stringent restrictions shall prevail.~~

a.F. Interpretation. In the interpretation and application of these standards, all provisions shall be:

1. Considered as minimum requirements;
2. Liberally constructed in favor of the governing body; and
3. Deemed neither to limit nor repeal any other laws.

i.G. Warning and Disclaimer of Liability. The degree of flood protection required by these performance standards is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. These standards do imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or damages. These standards shall not create liability on the part of the City of Sultan or by any officer or employee thereof for any flood damages that result from reliance on these standards or any administrative decision lawfully made thereunder.

17.08.070 Administration

A. ~~Designation of the Building and Zoning Responsible Official.~~

~~The building and zoning official Community Development Director or designee is hereby designated to administer and implement the provisions of these performance standards.~~

~~B. Permit Procedure. Application for a permit shall be made to the building and zoning official prior to any development activities, and shall include, but not be necessarily limited to plans drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing facilities; the location of the proposed development activity; proposed cuts and filling of any land area; existing and/or proposed storage of materials; existing and/or proposed stormwater drainage facilities; and the locations of all of the foregoing. Specifically, the following information is required:~~

~~1. Application Stage.~~

~~a. Elevation in relation to mean sea level of the proposed lowest floor (including basement) of all structures;~~

~~b. Elevation in relation to mean sea level to which any nonresidential structure will be floodproofed;~~

~~c. Certificate from a registered professional engineer or architect registered in the state of Washington that the nonresidential floodproofed structure will meet the floodproofing criteria contained in these performance standards; and~~

~~d. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.~~

~~2. Construction Stage. Provide a floor elevation or floodproofing certification after the lowest floor is completed. Upon placement of the lowest floor, or floodproofing by whatever construction means, it shall be the duty of the permit holder to submit to the building and zoning official's office a certification of the elevation of the lowest portion of the horizontal structural members of the lowest floor, as built, in relation to mean sea level. Said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same.~~

~~3. When floodproofing is utilized for a particular building, said certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. Any work undertaken prior to submission of the certification shall be at the permit holder's risk. The building and zoning official shall review the floor elevation survey data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the survey, or failure to make said corrections required hereby, shall be cause to issue a stop work order for the project. (Ord. 808-03)~~

B. Permit Procedure. Application for a floodplain development permit shall be made to the building and zoning official Community Development Department prior to any development activities, and shall include, but not be necessarily limited to site plans (see figure 1) drawn to scale showing the following:

1. The construction drawings and documents submitted with the application for a floodplain development permit shall be accompanied by a site plan showing to scale the size and location of new construction and existing structures on the site.

2. Distances from the lot lines, and front, side(s), rear, setbacks.

3. Established street grades and the proposed finished grades with quantities of cut/fill materials
 4. Zoning designation flood hazard areas, floodways, and "design flood elevations" drawn in accordance with an accurate boundary line survey and shall indicate elevation datum used for BFE (National Geodetic Vertical Datum 1929) (NVD 1929) or National Average Vertical Datum 1988 (NAVD 1988). Benchmark(s) set/used shall utilize this datum and conversion factors and comments.
 5. North arrow and scale the NFIP Community name and number, the (FIRM) map/panel number & suffix, FIRM index date, FIRM panel Effective/Revised Date, flood Zone(s)
 6. Base Flood Elevation(s), Required freeboard 1.6 feet, design flood elevation(s). Tax parcel number, plat name, lot number, street address.
 7. Longitude and latitude if known.
 8. Encroachments such as fences, driveways, roads, streets and rights-of-way.
 9. Critical areas and there buffers, including, wetlands, aquifer recharge, steep slopes, special flood hazard areas, floodway boundaries.
 10. Known threatened or endangered species on or within 200 feet of the property.
- C. The building official is authorized to waive or modify the requirement for a site plan when the application for permit is for alteration or repair or when otherwise warranted.
- D. As a condition of floodplain development permits issuance a benchmark or reference mark shall be set by a professional land surveyor licensed in the State of Washington and shall indicate
1. the ground elevation.
 2. datum used for BFE (National Geodetic Vertical Datum 1929) (NVD 1929) or National Average Vertical Datum 1988 (NAVD 1988) located within site distance of the structures foundation.
 3. If the property requesting a floodplain development permit has a floodway located on the property the floodway boundary shall be permanently marked by a state licensed surveyor.

2. Construction Stage.

Provide a floor elevation or flood proofing certification after the lowest floor is completed. Upon placement of the lowest floor, or flood proofing by whatever construction means, it shall be the duty of the permit holder to submit to the building and zoning official's office a certification of the lowest portion of the horizontal structural members of the lowest floor, as built, in relation to mean sea level. Said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. In addition to standard requirements of the adopted building codes, structures subject to provisions of this Chapter shall conform to the following standards, and building inspection processes shall certify compliance with these standards as a condition of issuance of Certificate of Occupancy.

- a. At the foundation inspection stage the inspector shall confirm the location, elevation, and datum of the referenced benchmark the inspector shall see that the benchmark is properly placed, and that the foundation is located as drawn on the site plan.
- b. Prior to pouring concrete, the contractor/homeowner shall call for a foundation form inspection. The following shall be in place for this inspection:

- i) foundation footing and stem wall forms.
 - ii) rebar, steel, bolts, hold-downs, straps, vents, accesses, buck-outs, plates, mud seal.
 - iii) foundation grade height is established and marked on the foundation formst;
- c. At the time of the foundation inspection the contractor or his representative shall document that:
 - i) the lowest floor shall be at a minimum 1.6" above the base flood elevation and per technical bulletin 11-01
 - ii) flood venting equals 1 square inch per square foot of floor area and the vents shall be 1 foot or less above the finish grade.
- d. If all applicable codes have been met the inspector shall document
 - i) the Base Flood Elevation.
 - ii) the projected amount of freeboard.
 - iii) the projected lowest floor elevation, the number
 - iv) square inches of flood vents
 - v) the projected lowest adjacent grade.
- e. After the concrete has been placed and form material has been removed, prior to the start of any framing work, the structure shall be inspected and shall be found to meet the following:
 - i) Foundation construction shall meet the National Flood Insurance Program (NFIP) minimum requirement for crawlspace construction in the Special Flood Hazard Area (SFHA) (see technical bulletin 11-01).
 - ii) The interior of the foundation area shall be filled so that it is level with or higher than the Lowest Adjacent Grade (LAG).
 - iii) All building materials at or below the base flood elevation must be flood resistant see technical bulletin 2-93. This requirement includes:
 - a. Floor joist, insulation, HVAC systems.
 - b. Ductwork can be elevated above the BFE or designed so that floodwaters cannot enter the system components during flood conditions.
 - c. Ductwork systems designed so that floodwater cannot enter the system must also be designed and encored to resist displacement.
- f. The exterior grade shall slope away from the building foundation at 2% or more for a minimum of five feet.
- g. The interior under floor area shall slope to a positive drainage system terminating at an exterior drainage system. (Typical under floor drainage system 4" pipe run under footing day-lighting 5+ feet from building with a pest screen on the end. Also note the building code requires 6-mill black plastic sheeting.)
- h. If the building inspector finds the structure in compliance with the adopted regulations he shall sign and date the inspection sheet and allow the work to proceed or if he finds corrections are needed he shall the permit holder or his agent of the actions/work needed to bring the project in to compliance.
- i. The inspector may require a elevation or/and a flood proofing certificate at the permit holders expense for the building under construction at this time if in his opinion it would benefit the project of help clarify an issue of concern.
- j. Note that this is not the final elevation or flood proofing certificate that will be required; a completed elevation or/and flood proofing certificate is required at the finish of the project.

k. Note that elevation and flood proofing certificates shall be signed, sealed, and dated by a Washington State Licensed professional Architect, Engineer, or Surveyor as required by Washington State Law.

3. It shall be the permit holders responsibility to insure the his structure/building/project is in compliance with the National Flood Insurance Program, Washington State adopted laws, City of Sultan adopted standards, regulations, and codes.

3.4.When flood proofing is utilized for a particular building, said certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The project shall follow the flood proofing requirements for structures located in special flood hazard areas in accordance with the National Flood Insurance Program (Technical Bulletin 7-93). Any work undertaken prior to submission of the certification shall be at the permit holder's risk. The building and zoning official shall review the floor elevation survey data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the survey, or failure to make said corrections required hereby, shall be cause to issue a stop-work order for the project.

17.08.080 Duties and responsibilities of the ~~building and zoning~~ Responsible Official.

The duties of the ~~building and zoning~~ responsible official shall include, but not be limited to:

A. Permit Review.

1. Review all permits to assure that the permit requirements of these standards have been satisfied.
 - a. Construction plan review,
 - b. Site plan review,
 - c. Construction document review; including building applications, flood plain development applications, engineering calculations, review elevation certificated flood proofing certificates, all Letters of Map Amendments and make comments regarding the amendments and revisions on behalf of the City of Sultan back to FEMA.
 - d. Review the Flood Insurance Study for the City of Sultan,
 - e. Review the Flood Insurance Rate Map's for the City of Sultan.
2. Advise the permittee that additional federal, State of Washington (Army Corps of Engineers 404, 401, typ), or Snohomish County (shorelines) (health dept. septic system) permits may be required, and if these specific permit requirements are known, require the copies of such permits be provided and maintained on file with the permit.
3. Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.
 - a. Notify adjacent communities and the Department of Ecology prior to any alteration or relocation of a watercourse, and

submit evidence of such notification to the Federal Insurance Administration.

4. Verify and record the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures.
5. Verify and record the actual elevation (in relation to mean sea level) to which the new or substantially improve structures have been flood proofed.
6. When flood proofing is utilized for a particular structure, the ~~building and zoning~~ responsible official shall obtain certification from a professional engineer or architect registered in the State of Washington.
7. Where interpretation is needed to the exact location of boundaries of the areas of special flood hazard (for example, where there appears to be conflict between a mapped boundary and actual field conditions), the ~~building and zoning~~ responsible official shall make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this section.
8. When base flood elevation data is not available either through the flood insurance study, FIRM, the responsible official shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a Federal, State or other source in order to administer Sections 110 through 130 of this chapter. Where elevation data is not available either through the flood insurance study, FIRM, or from another authoritative -source or from another authoritative source, applications for building permits shall be reviewed to assure that proposed construction will be reasonable safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate to at least two feet above the highest adjacent grade in these zones may result in higher insurance rates.
9. All records pertaining to the provisions of these performance standards shall be maintained in the office of the ~~building and zoning~~ responsible official and shall be open for public inspection.

17.08.90 Variance procedures.

Variances to provisions of this Chapter shall be processed by the City of Sultan Hearing Examiner according to provisions of Sections 2.26.090 through 2.26.140.

- A. Appeal of a Hearing Examiner Decision shall be to Superior Court or other appropriate body. The Planning Board and City Council are not involved in quasi-judicial processing of any portion of this Chapter.
- B. Applications for variances shall be submitted on forms provided by the City and fees called for in the Sultan Annual Fee Schedule shall be submitted at the time of application.
- C. It shall be the burden of proof of the applicant to provide evidence that all conditions required in Section 17.08.100 are met.
- D. Staff shall assemble a staff report for review by the Hearing Examiner
- E. Public notice shall be provided as called for in Chapter 16.124.
- F. The Hearing Examiner shall conduct a hearing and render a decision as provided in Sections 2.26.090 through 2.26.130 of this Code.

G. Appeals of the Hearing Examiner decision shall be made to Superior Court as provided in Section 2.26.140.

- ~~A. Variances may be issued for new construction and substantial improvements to be erected on a lot one half acre or less in size if it is contiguous to and surrounded by lots with existing structures constructed below the base flood level; provided, that all items contained in subsections (C)(1) through (9) of this section have been fully considered.~~
- ~~B. Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places without regard to procedures set forth in the remainder of this section, and provided the proposed reconstruction, rehabilitation, or restoration will not result in the structure losing its historical designation.~~
- ~~C. In passing upon such applications, all technical evaluations, all relevant factors, and all standards specified in other sections of these performance standards shall be considered, as well as:~~
- ~~1. The danger that materials may be swept into other lands to the injury of others;~~
 - ~~2. The danger to life and property due to flooding or erosion damage;~~
 - ~~3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;~~
 - ~~4. The importance of the services provided by the proposed facility to the community;~~
 - ~~5. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;~~
 - ~~6. The relationship of the proposed use to the comprehensive plan to that area;~~
 - ~~7. The safety of the access to the property in times of flood for ordinary and emergency vehicles;~~
 - ~~8. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters expected at the site; and~~
 - ~~9. The cost of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, electrical, water system, and bridges.~~
- ~~D. Upon consideration of, but not limited to, the factors listed above, conditions may be attached to the granting of variances as is necessary to further the purposes of these standards.~~
- ~~E. Variances shall not be issued within any designated floodway, if any increase in flood levels during the base flood discharge would result. (Ord. _____)~~

17.08.100 Conditions for variances.

Application

- A. Variances shall only be issued upon a written findings indicating determination that all of the following standards, criteria, and conditions are met.
1. General Variance Criteria:
 - a. ~~the~~ The requested variance is the minimum necessary, considering the flood hazard, to afford relief.
 - b. In the case of an historic building, a determination must be made that the variance is the minimum necessary so as not to destroy the historic character, design, and designation of the building.
- ~~Variances shall only be issued upon:~~
- c. A showing of good and sufficient cause;

1. d. A determination that failure to grant the variance would result in exceptional hardship; and
~~A determination that the~~
 - e. granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create a nuisance, cause fraud on or victimization of the public, or conflict with existing laws.

2. Variance Criteria for New Construction

Variances may be issued for new construction and substantial improvements to be erected on a lot one-half acre or less in size if it is contiguous to and surrounded by lots with existing structures constructed below the base flood level; provided, that all items contained in subsections (B)(1) through (9) of this section have been fully considered.

3. Variance Criteria for Historic Structures

Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places without regard to procedures set fourth in the remainder of this section, and provided the proposed reconstruction, rehabilitation, or restoration will not result in the structure losing its historical designation.

B. Conditions to be considered in application of Variance Criteria:

1. The danger that materials may be swept into other lands to the injury of others;
2. The danger to life and property due to flooding or erosion damage;
3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
4. The importance of the services provided by the proposed facility to the community;
5. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
6. The relationship of the proposed use to the comprehensive plan to that area;
7. The safety of the access to the property in times of flood for ordinary and emergency vehicles;
8. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters expected at the site; and
9. The cost of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, electrical, water system, and bridges.

C. Upon consideration of, but not limited to, the factors listed above, conditions may be attached to the granting of variances as is necessary to further the purposes of these standards.

1. Variances shall not be issued within any designated floodway, if any increase in flood levels during the base flood discharge would result.

D. Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation to which the structure is to be built and stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

C.E. The office of the building and zoning official shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.

17.08.110 Provisions for flood hazard reduction.

- A. General Standards. In all areas of special flood hazard the following provisions are required:
1. New construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
 2. All manufactured homes shall meet the anchoring standards of subsection (B) (4) (b) (ii) of this section.
 3. New construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage. See Technical Bulletin 2-93 Flood-Resistant Materials requirements
 4. New construction and substantial improvements shall be erected by methods and practices that minimize flood damage.
 5. Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
 6. New or replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
 7. New or replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into them and discharges from them into flood waters.
 8. On-site waste disposal systems (septic tanks) shall be located and constructed to avoid impairment to them or contamination from them during flooding.
 9. Any alteration, repair, reconstruction or improvements to a structure that is in compliance with the provisions of these section, shall meet the requirements of "new construction" as contained in this section.
- B. Specific Standards. In all areas of special flood hazard where base flood elevation data have been provided, the following provisions are required:
1. Residential Construction. New construction and substantial improvements of any residential structure shall have the lowest floor, including basement, elevated no lower than 1.6 feet above the base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of flood waters shall be provided per subsection (B) (3) of this section.
 2. Nonresidential Construction. New construction and substantial improvements of any commercial, industrial, or nonresidential structure shall either have the lowest floor including basement, elevated 1.6 feet or more above the base flood elevation, together with attendant utility and sanitary facilities, or shall:
 - a. Be flood proofed to a point 1.6 feet or more above the base flood elevation so that the structure is watertight with walls substantially impermeable to the passage of water.
 - b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

- c. Be certified by a professional engineer or architect registered in the State of Washington, that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provide to the official as set forth in SMC 17.08.070;
 - d. Nonresidential structures that are elevated, not flood proofed, must meet the same standard for space below the lowest floor as described in subsection (B) (3) of this section.
 - e. Applicants flood proofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the flood proofed level (e.g., a building flood proofed to the base flood level will be rated as one foot below).
3. Elevated Buildings. New construction and substantial improvements of elevated buildings that include fully enclosed areas formed by foundation and other exterior walls below the base flood elevation shall be designed to preclude finished living space and designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls and shall be designed and built so that the interior finished grade will be at or above the exterior finished grade on at least the entire length of one foundation wall. See technical bulletin 11-01.
- a. Designs for complying with this requirement must either be certified by a professional engineer or architect registered in the State of Washington or meet the following minimum criteria:
 - i. Provide a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding; Note this includes attached garages.
 - ii. The bottom of all openings shall be no higher than one foot above the finished/landscaped exterior grade; and
 - iii. Opening may be equipped with screens, louvers, valves or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions.
 - b. Electrical, plumbing, and other utility connections are prohibited below the base flood elevation;
 - c. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator); and
 - d. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.
4. Manufactured Homes.
- a. All manufactured homes to be place or substantially improved within A1-A30, AH, and AE on the community's FIRM on sites:
 - i. Outside of a manufactured home park or subdivision;
 - ii. In an new manufactured home park or subdivision;
 - iii. In an expansion to an existing manufactured home park or subdivision;

- iv. In an existing manufactured home park or subdivision on which a manufactured home has incurred “substantial damage” as a result of a flood; shall be elevated on a permanent foundation such that the lowest floor of the manufacture home is elevated 1.6 feet above the base flood elevation and be securely anchored to an adequately designed foundation anchor foundation system to resist flotation, collapse and lateral movement;
 - b. Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A1-A30, AH, and AE on the community’s FIRM that are not subject to the above provisions be elevated so that either:
 - i. The lowest floor of the manufactured home is elevated 1.6 feet above the base flood elevation, or
 - ii. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored designed foundation system to resist floatation , collapse, and lateral movement.
- 5. ~~floodways~~Floodways. Located within areas of special flood hazard are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters that carry debris and potential projectiles and has erosion potential, the following provisions shall apply:
 - a. Encroachments, including fill, new construction, substantial improvements, and other development, shall be prohibited, unless certification (with supporting technical data) by a professional engineer registered in the State of Washington is provided, demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that such encroachments shall not result in any increase in flood levels during occurrence of the base flood discharge.
 - b. Construction or reconstruction of residential structures is prohibited within designated floodways, except for:
 - i. Repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; and
 - ii. Repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50 percent of the market-assessed value of the structure either (A) before the repair or reconstruction is started, or (B) if the structure has been damaged, and is being restored, before the damage occurred. Any project to improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions or to

structures identified as historic places shall not be included in the 50 percent.

- c. If no floodway is designated, then a setback of 30 feet from the banks of the watercourse, river, stream or pond that is reserved to discharge the base flood wherein encroachments shall be prohibited. Once a base flood elevation has been established, it must be demonstrated that the ~~commutative~~ cumulative effect of the proposed development, including substantial improvements and fill, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

17.08.120 Standards for subdivision proposals.

- A. All subdivision proposals shall be consistent with the need to minimize flood damage;
- B. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize damage.
- C. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards; and
- D. Base flood elevation data shall be provided for subdivision proposals and other proposed development, ~~that is no less than three acres in size.~~

17.08.130 Recreational vehicles.

Recreational vehicles placed on sites within Zones A1-A30, AH, and AE on the community's FIRM ~~either:~~

- ~~A. Be on the site for fewer than 180 consecutive days; r~~ Recreational vehicles may shall not be left in a flood zone during a flood warning or watch.
- B. Recreational vehicles not removed by the owner during a flood watch or warning may be towed to an impound yard and stored at the owners expense.
- BC. Recreational vehicles stored on property covered by any of the above listed FIRM zones shall Bbe fully licensed and ready for highway use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has have no permanently attached additions.
- GD. No r Recreational vehicle may shall not be used as a permanent residence.

17.08.140 Critical Facility.

- A. Construction of new critical facilities shall be, to the extent possible located outside the limits of the special flood hazard area (SFHA) (100-year floodplain).
- B. Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available.
- C. Critical facilities constructed within the SFHA shall have the lowest floor elevated three feet or more above the base flood elevation (100-year) at the site.
- D. Flood proofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into flood waters.
- E. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities, ~~to the extent possible.~~